PQ Corporation

Georgia Manufacturing Extension Partnership

Augusta Chemical Manufacturer Increases Productivity, Saves Money with Customized Software Solution from Georgia MEP

Client Profile:
Founded in 1831, the PQ Corporation (known as the Philadelphia Quartz Company from 1864 until 1978) is one of the world's leading developers and producers of inorganic chemicals and performance particles. Across its 61 manufacturing sites in 20 countries and five continents, PQ has introduced novel products, including silica gels, silica catalysts, hollow microspheres, synthetic zeolites, zeolite catalysts and other silica derivatives. Today it markets more than 40 distinct, silica-based chemical and performance product lines. The Augusta, Georgia, facility, which has three operating plants on one site and employs 65 people, manufactures sodium silicate, zeolites and hollow microspheres. Zeolites are used in laundry detergent and microspheres are used as a filler. The products are used in the automotive industry and the detergent industry, among others.

Situation:
PQ's site manager, John Cobb, hoping to improve the company's existing inventory tracking system, attended an spreadsheet workshop at the regional office of the Georgia Manufacturing Extension Partnership (Georgia MEP), a NIST MEP network affiliate. At the time, inventory logs were filled out manually and then transferred to a spreadsheet. According to PQ Administrator, Nicole Cisco, the process was complicated and ran the risk of human error. "We have more than one hundred classifications of hollowspheres and multiple sizes of containers for each grade," she says. "Between shipping and production, we'd have at least four or five spreadsheets going simultaneously." PQ needed a better inventory tracking system for its Q-Cel™ product line, the hollow microspheres. Q-Cel includes many different product lines and comes in different size packaging. PQ's other sodium-silicate based products are shipped out of the plant in trucks, so inventory can be measured according to tank levels. PQ contacted Georgia MEP for assistance with their inventory tracking system.

Solution:
Georgia MEP Information Technology Specialist, Tianna Marynell, recognized that a customized database solution would be better suited for PQ's needs than its current system of spreadsheets. "I met on site with the production assistant, and she gave me printed copies of the spreadsheets. I designed a system to replicate that to a certain level," says Marynell. "Under the previous system, there might be a truck ready to be loaded and shipping would be waiting. Now, they can go in and pull it up themselves – they're not waiting on anything." Another issue considered when designing the software tracking system was the lab analysis and quality check for the product. The grade of the hollow microspheres is determined by its density. "Some of the customers have certain specifications and the products have to be within a certain range, whereas other customers go by general specs. The new database system will automatically tell them whether it meets the customer's specifications or not," Marynell explains. "If the product is out of spec for a particular customer, it will remain in the general inventory." Cisco says that the biggest challenge to date has been getting the PQ employees

comfortable with the new system. “Even though an old system may be a more difficult way of doing something, you get comfortable with it,” she says. “The actual conversion to the new system is going to be the hardest part. Once our employees get acclimated, it’s going to be a whole lot simpler than what they’re anticipating.”
The Augusta PQ facility is the pilot plant for the new database-based inventory tracking system. PQ’s corporate headquarters in Valley Forge Pennsylvania, contacted Marynell about a similar software-based solution for its other facilities. In addition to the new Q-Cel inventory tracking system, the Augusta site plans to use Georgia MEP's services in developing another customized software program to help maintenance staff track parts received.

Results:
* Saved in excess of $40,000.
* Improved inventory accuracy by 100 percent.
* Reduced inventory time by one day.

Testimonial:
“If anything comes up that falls along the lines of a database, I am confident I would call on Georgia MEP again. Everything we’ve asked for is pretty much exactly how we received it. Georgia MEP has been a godsend.”
Nicole Cisco, Administrator